CLAIMS

What is claimed is:

1. A composition of matter comprising an enzyme activity and having the following identifying characteristics:

(a) present in a fraction from a crude preparation of *Hansenula polymorpha* ATCC No. 26012, *Hansenula polymorpha* ATCC No. 74449, or any other suitable mutant thereof, where said crude fraction is prepared by: inducing cells of *Hansenula polymorpha* ATCC No. 26012, *Hansenula polymorpha* ATCC *Hansenula polymorpha* ATCC No. 74449, or any other suitable mutant thereof, with an amount of the compound of Formula (I) under suitable conditions to permit the induction of the enzyme activity capable of stereoselectively reducing racemic tetralone to chiral tetralone, centrifuging said induced cells, resuspending said centrifuged cells in a breaking buffer comprising beads, rupturing said resuspended cells under suitable conditions to permit disruption of said cells and retention of an appreciable amount of said enzyme activity, centrifuging said breaking buffer after said rupturing, retaining the supernatant of said centrifuged breaking buffer, and adding a protein stabilizing agent to said supernatant;

(b) present in a fraction of the fraction described in (a) above, where said fraction is obtained by: adding a DNA precipitating agent to an amount of said fraction described in (a) above, centrifuging said crude extract, retaining the supernatant of said centrifuged crude extract, adding a protein precipitating agent to said supernatant of said centrifuged crude extract to achieve about 48% fractional saturation, centrifuging said supernatant having about 48% fractional saturation, retaining said supernatant and adding a protein precipitating agent to said supernatant to achieve about 75% fractional saturation, centrifuging said supernatant having about 75% fractional saturation, retaining the pellet resulting from said centrifugation, resuspending the proteins comprising said pellet in a buffer and desalting and then concentrating said proteins in said buffer;

(c) present in a fraction of the fraction described in (b) above, where said fraction is obtained by: loading an amount of said fraction described in (b) above onto a column comprising a material capable of reversibly associating with said proteins comprising said fraction described in (b) and having said enzyme activity, eluting said reversibly associated proteins from said column using an NADPH gradient, assaying

each eluted fraction for said enzyme activity, and pooling said eluted fractions having said enzyme activity;

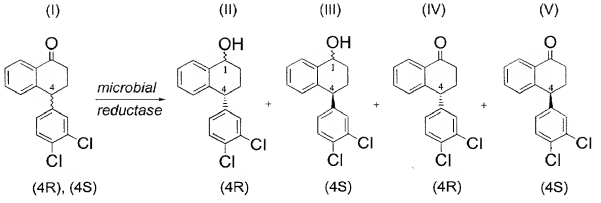
(d) present in a fraction of the fraction described in (c) above, where said fraction is obtained by: desalting an amount of said fraction described in (c) above, loading an amount of said desalted fraction onto a column comprising an anion exchange material and capable of reversibly binding said proteins of said desalted fraction and having said enzyme activity, eluting said reversibly associated proteins from said column using a salt gradient, assaying each eluted fraction for said enzyme activity, and pooling said eluted fractions having said enzyme activity;

(e) present in a fraction of the fraction described in (d) above, where said fraction is obtained by: desalting an amount of said fraction described in (d) above, loading an amount of said fraction described in (d) above onto a column comprising a weak anion exchange material and capable of reversibly binding said proteins of said desalted fraction and having said enzyme activity, eluting said reversibly associated proteins from said column using a salt gradient, assaying each eluted fraction for said enzyme activity, and pooling said eluted fractions having said enzyme activity; and

(f) present in a fraction of the fraction described in (e) above, where said fraction is obtained by: desalting an amount of said fraction described in (e) above, concentrating said desalted fraction, loading an amount of said concentrated fraction onto a column comprising a size exclusion material, and eluting a fraction comprising a polypeptide of from about 110,000 D to about 200,000 D and having said enzyme activity;

where said activity is present in said fractions when an amount of racemic tetralone is stereoselectively reduced to an amount of chiral tetralone.

2. A process for the stereoselective reduction of a compound of Formula (I) to compounds of Formulae (II) and (III)



which comprises: contacting a compound of Formula (I) with a composition of matter comprising an enzyme activity capable of accomplishing the subject reduction and a co-factor for said enzyme, and incubating the resulting mixture under conditions sufficient to yield more of the compound of Formula (II) than the compound of Formula (III), thus leaving more of the compound of Formula (V) unreacted than the compound of Formula (IV) unreacted; where said composition of matter is as defined in claim **1**.